



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David C. Morris      Group Art Unit: 3745  
Serial No.: 09/328,931      Examiner: C. Verdier  
Filed: 06/09/1999      Attorney Docket: MO1.003  
Title: HELICOPTER BLADE ASSEMBLY ADAPTED TO PERMIT  
RAPID FORWARD FLIGHT

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DECLARATION UNDER §1.132

I have reviewed the concept presented by Mr. David C. Morris and have concluded that for his invention lift is generated in proportion to the speed of rotation and to the angle of attack of the virtual disk. It does not depend upon the angle of attack of individual blades.

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During rapid forward flight the blade assembly of the invention operates in a fundamentally different manner from that of a standard helicopter. The standard helicopter works in such a manner that each rotating blade cuts through the air with a sufficient angle of attack as to provide lift. In the invention, however, (at sufficiently high rates of rotation), air flows over a virtual disk created by the rotation of the blade assembly to create lift: the individual blades do not have a positive angle of attack

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In addition, between standard blade performance and the virtual lifting disk concept: advancing and retreating blade speeds will have no effect on ultimate forward speed as they do on the forward speed of standard helicopters. Fast forward flight would be a feature of the invention.

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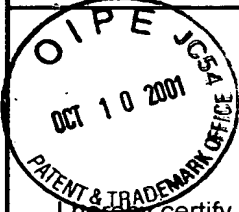
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**CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)**Applicant(s): **David C. Morris**

Docket No.

**MO1.003**Serial No.  
**09/328,931**Filing Date  
**06/09/1999**Examiner  
**C. Verdier**Group Art Unit  
**3745**

Invention:

**HELICOPTER BLADE ASSEMBLY ADAPTED TO PERMIT RAPID FORWARD FLIGHT**I hereby certify that this **Declaration Under 1.132 signed by Daniel P. Schrage***(Identify type of correspondence)*

is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The  
Assistant Commissioner for Patents, Washington, D.C. 20231 on 10/05/2001

*(Date)***Mari Yamamoto***(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)***Note: Each paper must have its own certificate of mailing.**

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